IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Richard Merrill		)	Date: January 27, 2005
Serial No.	10/612,898	)	Group Art Unit: 3727
Filed:	07/07/2003	)	Examiner: Lien M. Ngo
For:	REMOVABLE SEALING DEVICE	)	

AFFIDAVIT OF RICHARD MERRILL PURSUANT TO 37 C.F.R. 1.131

I, RICHARD MERRILL, being first duly sworn, depose and state as follows:

1. I am a resident of Brooksville, Maine. All statements made herein are based on my own personal knowledge.

2. I am the sole inventor of the Removable Sealing Device which is the subject of an application for patent, Serial No. 10/612,898.

3. I invented the Removable Sealing Device earlier than May 28, 2003.

4. I invented the Removable Sealing Device at least as early as January 6, 2003, on which date I filed a disclosure document with the United States Patent and Trademark Office. A true and accurate copy of same is attached hereto.

5. The disclosure document accurately and fully discloses the invention which is the subject of the application for patent, Serial No. 10/612,898.

6. I also fully disclosed the Removable Sealing Device to my attorney, Anthony D. Pellegrini, at a meeting held on March 4, 2003 for the purpose of my engaging Mr. Pellegrini to prepare a patent application for the Removable Sealing Device invention.

7. From the date I invented the Removable Sealing Device to the date of filing of a patent application for that invention, I have diligently pursued protection for the invention and did not abandon it nor disclose it to the public nor offer it for sale.

8. The patent application of *Unsworth* (Pub. US 2004/238477) is no longer pending, as it was abandoned on January 3, 2005 for failure to respond to an office action mailed on June 2, 2004, according to the United States Patent and Trademark Office's Public Patent Application Information Retrieval system (PAIR).

Signed under the pains and penalties of perjury this 27th day of January, 2005.

RICHARD MERRILL

STATE OF MAINE
COUNTY OF Hancock, ss January 27, 2005

Personally appeared the above-named Richard Merrill and made oath to the truth of the foregoing statements based on his own personal knowledge.

Before Me,

Notary / ~~Attorney at Law~~

BONNIE A. MARCKOON
Notary Public • State of Maine
My commission expires April 9, 2006

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it di

DISCLOSURE DOCUMENT NO.

524174

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PTO-1652 (8/99)

Disclosure Document Deposit Request

Mail to:

Box DD
Assistant Commissioner for Patents
Washington, DC 20231

Inventor(s): Richard Merrill

Title of Invention: Spill-Preventive Opening Device for Fluid or Granule Container

Enclosed is a disclosure of the above-titled invention consisting of 4 sheets of description and 1 sheets of drawings. A check or money order in the amount of $10.00 is enclosed to cover the fee (37 CFR 1.21(c)).

The undersigned, being a named inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document Program, and that they be preserved for a period of two years.

Richard Merrill
Signature of Inventor

1643 Coastal Road
Address

Richard Merrill
Typed or printed name

01/06/03
Date

Brooksville, ME 04617
City, State, Zip

NOTICE OF INVENTORS

It should be clearly understood that a Disclosure Document is not a patent application, nor will its receipt date in any way become the effective filing date of a later filed patent application. A Disclosure Document may be relied upon only as evidence of conception of an invention and a patent application should be diligently filed if patent protection is desired.

Your Disclosure Document will be retained for two years after the date it was received by the United States Patent and Trademark Office (USPTO) and will be destroyed thereafter unless it is referred to in a related patent application filed within the two-year period. The Disclosure Document may be referred to by way of a letter of transmittal in a new patent application or by a separate letter filed in a pending application. Unless it is desired to have the USPTO retain the Disclosure Document beyond the two-year period, it is not required that it be referred to in the patent application.

The two-year retention period should not be considered to be a "grace period" during which the inventor can wait to file his/her patent application without possible loss of benefits. It must be recognized that in establishing priority of invention an affidavit or testimony referring to a Disclosure Document must usually also establish diligence in completing the invention or in filing the patent application since the filing of the Disclosure Document.

If you are not familiar with what is considered to be "diligence in completing the invention" or "reduction to practice" under the patent law or if you have other questions about patent matters, you are advised to consult with an attorney or agent registered to practice before the USPTO. The publication, *Attorneys and Agents Registered to Practice Before the United States Patent and Trademark Office*, is available from the Superintendent of Documents, Washington, DC 20402. Patent attorneys and agents are also listed in the telephone directory of most major cities. Also, many large cities have associations of patent attorneys which may be consulted.

You are also reminded that any public use or sale in the United States or publication of your invention anywhere in the world more than one year prior to the filing of a patent application on that invention will prohibit the granting of a patent on it.

Disclosures of inventions which have been understood and witnessed by persons and/or notarized are other examples of evidence which may also be used to establish priority.

There is a nationwide network of Patent and Trademark Depository Libraries (PTDLs), which have collections of patents and patent-related reference materials available to the public, including automated access to USPTO databases. Publications such as *General Information Concerning Patents* are available at the PTDLs, as well as the USPTO's Web site at www.uspto.gov. To find out the location of the PTDL closest to you, please consult the complete listing of all PTDLs that appears on the USPTO's Web site or in every issue of the Official Gazette, or call the USPTO's General Information Services at 800-PTO-9199 (800-786-9199) or 703-308-HELP (703-308-4357). To insure assistance from a PTDL staff member, you may wish to contact a PTDL prior to visiting to learn about its collections, services, and hours.

EL557415750 US

Spill-preventive opening device for fluid or granule container

Inventor: Richard Merrill, 1643 Coastal Road, Brooksville, Maine 04617

Date of invention: June 14, 2002

Abstract

A combination sealing/opening device for existing fluid or granule containers which allows the container to be opened after it is in an inverted position over a receptacle for fluid or granules. The device is made from a membrane or combination of membranes or other materials; said membranes or combination of membranes, in the case of an adhesive sealant being used, to be of low coefficient of friction and moderate tensile and tear strength; or in the case of a heat seal being used, to be of frangible material bonded to material with moderate tensile and tear strenth; with a sealing end and a handle end connected by an isthmus which may of any convenient length, and may be, but is not necessarily, narrower than the sealing end or the handle end. The isthmus is folded back over the seal end and fastened down the side of the container by any convenient means. The handle end of the device is grasped and pulled toward the bottom of the container. If the container is inverted, as in the case of an automotive engine oil container inverted in the oil fill receptacle, the handle is pulled upward. This pulling motion peels the sealing end away from the mouth of the container, or otherwise breaks the seal, allowing the contents of the container to flow into the receptacle without spilling outside the receptacle.

Other seal-breaking devices may be included as appropriate to the application, such seal-breaking devices including but not limited to a blade of any material capable of cutting the membrane, said blade attached to the membrane in such a way that tension on the handle forces the point to come in contact with the membrane, thereby cutting or tearing it. The handle end may be reinforced with other material or shaped in such a way as to render it convenient to grip. The sealing end is sized for the container to which it is to be applied, and is sealed to the open mouth of the container with any of the adhesives or other means, including but not limited to heat sealing, currently in use for this purpose. Means for fastening the isthmus to the container including, but not limited to, a strap adhered to the container crossing over the isthmus, or a mild adhesive fastening the isthmus and/or handle end to the container, or any other practical means. This arrangement leaves the handle end available to grip when the cap of the container is in place, such cap being applied over the membrane device. The presence of the cap on the container prevents inappropriate or premature operation of the device by clamping force. In operation, the cap of the container is removed, and the container is inverted over the opening of the fluid or granule receptacle, or is inserted into the opening of the receptacle. One example of this use is an oil container inserted into the oil receptacle of an automobile engine. Another example of its use would be its application on the container of a toxic substance, whether fluid or granular, in a chemical laboratory.

I claim

1. A device sealing the mouth of a fluid or granule container,

said device being removable when the container is in position for emptying its contents into a receptacle, the device comprising:

a membranous shape of any suitable material or combination of materials, with a sealing end shaped and sized for the container to which it will be applied, and a handle end connected by an isthmus which will withstand the pulling force required to peel the sealing end from the adhesive or by other means break the seal on the mouth of the container;

the material or combination of materials of which the device is made to be of low coefficient of friction to allow the application of a cap or lid to the container over the device without modification to the container or to the cap or lid;

said handle end being temporarily fastened to the side of the container if it is appropriate in the event of storage, display on a shelf, or transportation of the container, such events not interfering thereby with the integrity of the seal of the container;

wherein breakage of the seal allows the contents of the container to flow into the receptacle with out spilling outside the receptacle.

2. The device of claim 1, with a blade of any suitable material attached to the membrane, said blade capable of cutting the membrane when force on the handle end causes it to come in contact with the membrane.

3. The device of claim 1, wherein the membranous material or combination of materials is scored to facilitate tearing when tensile force is applied to the handle end.

4. The device of claim 1, wherein the membranous material is foil.

5. The device of claim 1, wherein the membranous material is transparent.

6. The device of claim 1, wherein the membranous material is plastic.

7. The device of claim 1, wherein the membranous material is woven fabric.

8. The device of claim 1, wherein the membranous material is non-woven fabric.

9. The device of claim 1, wherein the membranous material is permeable.

10. The device of claim 1, wherein the membranous material is impermeable.

11. The device of claim 1, wherein the device is an itegral part of the container and made of the same material thereof.

Description

FIELD OF THE INVENTION

A sealing device for a fluid or granule container whereby the spilling of the fluid or granules when transferring said contents to a receptacle is prevented by the use of the device.

BACKGROUND OF THE INVENTION

In the transfer of pourable materials, whether fluid or granular, from the container of the material to a receptacle, spillage often takes place. This happens if the size of the mouth of the container is large in proportion to the size of the opening in the receptacle, or if the working environment, such as under the hood of an automobile, renders transfer of the material, such as engine oil, difficult to effect without spillage of materials and all the hazards and inconveniences attending the spillage. In the case of an automobile engine, oil spillage may degrade components fo the engine, or interfere with their function. It may also lead to fire if the oil is spilled in sufficient quantity on hot engine parts. In the case of a bakery, flour, baking soda, or powdered sugar may spill when poured from a container into a bin or receptacle. This wastes valuable material, creates extra labor to clean the spill, and may introduce particulate matter into the air, threatening the health of the person doing the pouring as well as others nearby. In a chemical laboratory in a school or business, it is common practice to pour chemical reagents from large containers into smaller ones, such as beakers or flasks. Spillage in this case is particularly hazardous, since many chemical reagents are extremely toxic, as well as producing noxious fumes.

The advantages of placing the container mouth into the receptacle before unsealing the container are many. Prevention of oil spills by drivers even on windy days, in the dark; reduction of material waste and airborne particulates; and reduction of the hazards of handling noxious and toxic chemicals, including the reduction in production of noxious fumes; these are all advantages which would accrue with the use of the stated device.

There have been a number of attempts by others to design containers, particularly in the troublesome case of engine oil, which would eliminate spillage. The device disclosed here is fundamentally different from other designs, in that it *does not require a specially designed container*, but may be applied to existing containers with little or no modification in the container.

This device is easy to manufacture, being made primarily of sheet goods, with adhesive applied in some cases. It can be made to any scale, so long as the seal can be broken by application of manual force, although a lever could be added to increase the force applied to break the seal, if scale of the container warrants.

OBJECTS OF THE INVENTION

Thus, it is the object of the Applicant's invention to make the use of existing containers more convenient, less wasteful and safer, by applying the sealing device disclosed herein to existing containers, with little or no modifications necessary to containers, and without the necessity of manufacturing special containers.

SUMMARY OF THE INVENTION

This and other objects are provided in a sealing device which can be removed from the mouth of the container after an existing container equipped with said device is inverted or otherwise in position to empty its contents into a receptacle. In the case of an adhesive being used to apply the seal to the mouth of the container, the material is to be a membranous material with a relatively low coefficient of friction, or in the case of more than one material, as in a layered assembly of membranous materials, the outer layers are to be of low coefficient of friction and the inner layer or layers to be of moderate tensile strength.

The sealing end of the device being shaped to the mouth of an existing container, it is applied, by means known to those skilled in the art, with adhesive or heat so as to effect a seal. The handle end of the device is connected to the sealing end by an isthmus. The isthmus may be of any length that allows the user to grip the handle end after the container is placed in juxtaposition to the receptacle in preparation for pouring its contents into the receptacle.

The material or materials of the device being of low coefficient of friction, a cap or lid may be applied over the device after it is in place without disturbing it or reducing its effect. The materials being of low coefficient of friction, the handle end may be shaped to make it convenient to grasp, thereby for the purposes of grasping, nullifying the effect of the low coefficient of friction on the seal end to enable convenient grasping on the handle end.

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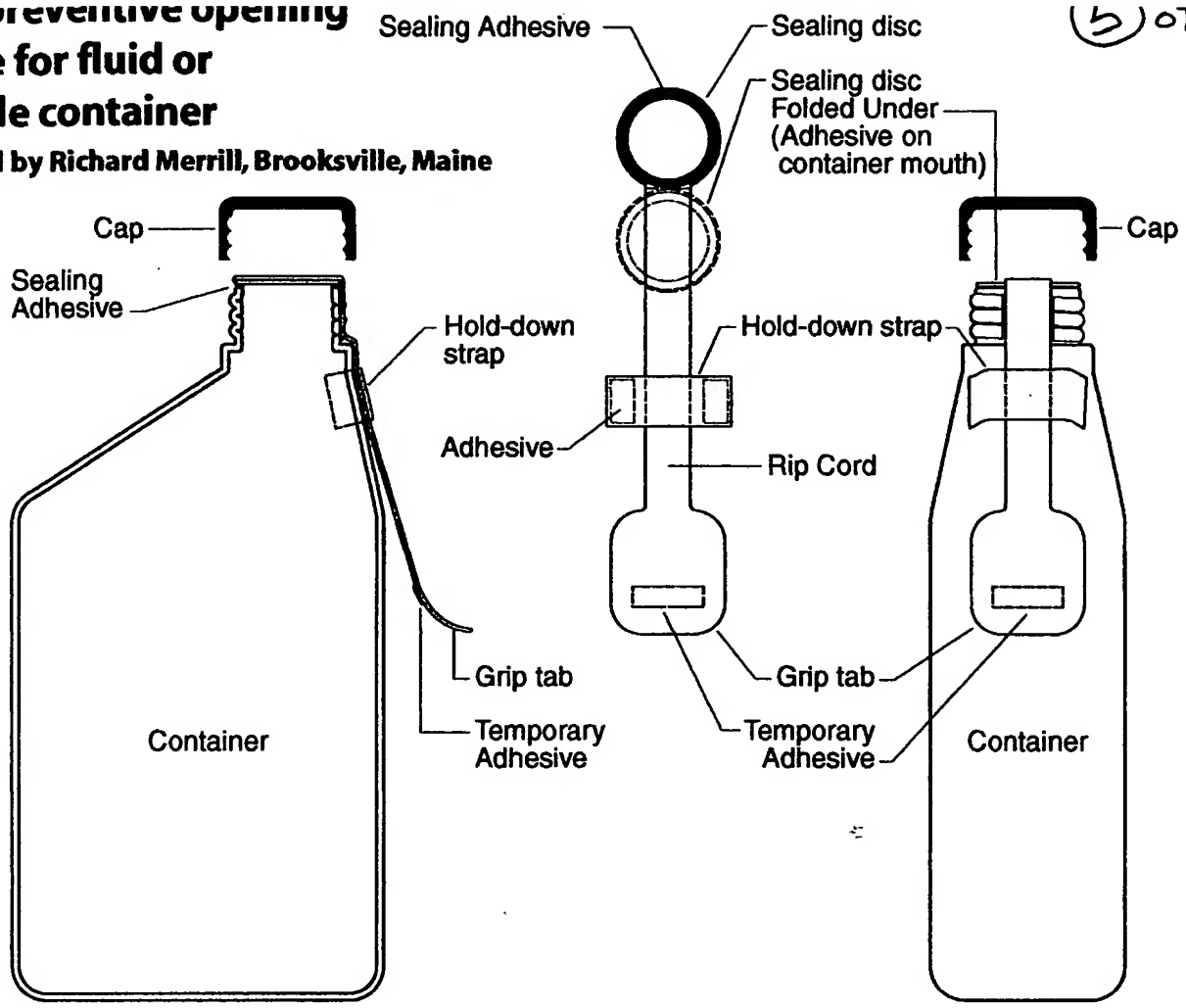
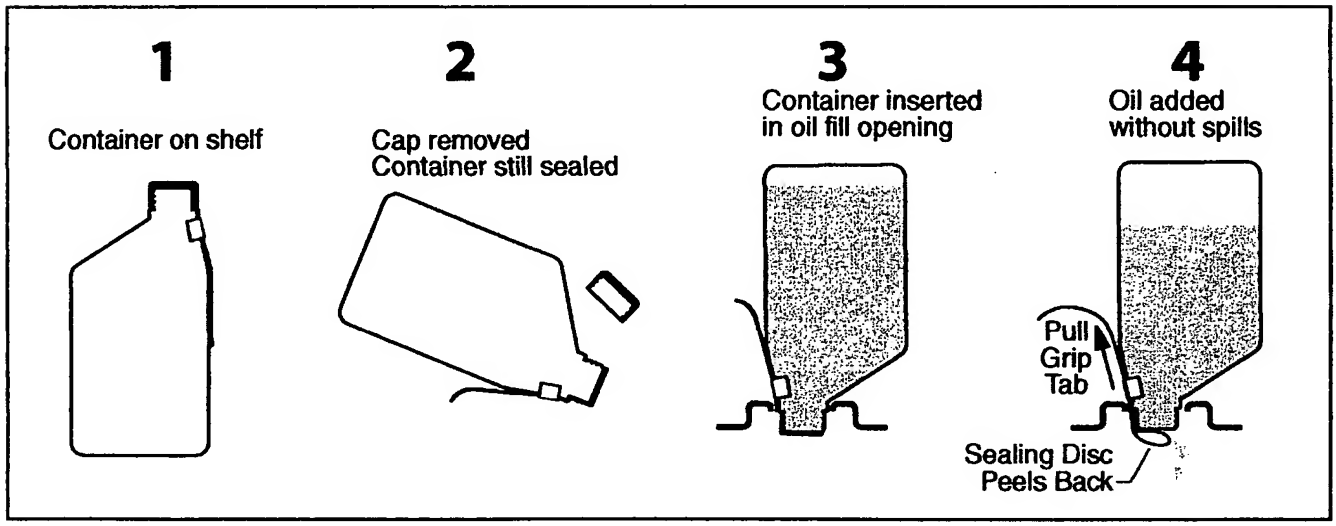
Spill-preventive opening device for fluid or granule container

Invented by Richard Merrill, Brooksville, Maine





Oil Container with Spill-Proof Opener

Invented by Richard Merrill, Brooksville, Maine

Modification to Existing Oil Container to allow user to add engine oil without spills.

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